

## **THE IMPACT OF ECONOMIC OPENNESS DEGREE ON GDP GROWTH IN MALAYSIA AND SOME NEIGHBORING COUNTRIES FOR THE PERIOD 1990-2010**

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### **ABSTRACT**

The economic openness between nations die certainly to the occurrence of economic development in the same countries as the increasing exports and reducing imports, economic target for each country to increase its economic resources and increase economic growth has and consequently an increase in per capita income, which is reflected on the improvement and welfare of the community and helping to overcome the economic and social problems, One of the main subjects of the Pure Theory of International Trade has been the study of Comparative Advantage, that is, the determination of trade patterns. Ricardo focused on relative cost differences based on technology, whereas the conventional Heckscher-Ohlin model shows that even with identical technologies and constant returns, relative costs can differ if factor proportions differ, Adam Smith was probably the first one to consider the effects of market size on specialization and therefore on volumes exchanged. The theory of commercial policy also establishes a relation between protection and volume of trade, and the researchers suggest that trade to GDP ratios are market determined variables subject to conventional theoretical analysis and empirical verification, This paper I shall use the ratio  $D.OP = \{(Exports/Imports) \times 100\}$  as the measure for openness of the economy to countries like Malaysia, Indonesia, Singapore, Philippine and Thailand then compare with each other to gain access to the state the most open and influential in the economy The cause of calculate openness in this way unlike calculating some which combines imports and exports and then divides the result by the gross domestic product to become ratio represents the degree of openness, but cannot measure this degree on economic growth and on economic indicators as is the proportion as in economic sectors that are also a certain percentage and so I would suggest this solution to indicate the degree of economic openness are then estimated using regression models the effect of the degree of economic openness on GDP growth.

**KEYWORDS:** International Economics, Economic Policies, Econometrics

### **INTRODUCTION**

The different political capitalism was designed to develop their economies and keep up with the capitalist world to get to make big gains at the expense of each other, but the economic history has shown the failure of these economies to maintain the continuity of being closed as the need for various resources that are raw materials in the production process as well as the need for global markets, making it in the case of competition produced with global production and specification of goods in the market, but this was a major constraint upon because of the cartel of large corporations infringing nationality and international organizations, which caused the failure of these economies to meet local demands and to develop their economies because of its inability for economic competition with other countries in various fields of economic and so quickly these countries to open their economies and the development of economic structure, which fits with the development of the world and find the goods-producing competitive goods in world markets and the search for markets, the important and accessible by any means that achieve profit the necessary In this sense, the economic openness

between nations die certainly to the occurrence of economic development in the same countries as the increasing exports and reducing imports, economic target for each country to increase its economic resources and increase economic growth has and consequently an increase in per capita income, which is reflected on the improvement and welfare of the community and helping to overcome the economic and social problems, One of the main subjects of the Pure Theory of International Trade has been the study of Comparative Advantage, that is, the determination of trade patterns. Ricardo focused on relative cost differences based on technology, whereas the conventional Heckscher-Ohlin model shows that even with identical technologies and constant returns, relative costs can differ if factor proportions differ, Adam Smith was probably the first one to consider the effects of market size on specialization and therefore on volumes exchanged.

The theory of commercial policy also establishes a relation between protection and volume of trade. (James B. Ang and Warwick J. Mckibbin 2005)[1] indicted to the Financial sector development growth in Malaysia so explain how to development the financial sector by calculated the growth rate .(IMF 2010)[2], represent report contain of the economic growth rates for all countries for many years to the all sectors, and publish the researcher (Kleiner, Jurgen, Korea 2001)[3] research entitled (A century of change) lunched all the economics change in the countries by using time-series data, and explain the (Lacramioara Dominte 1983)[4] how the impact the economics Openness on the economics by explain the determinants which effect on the economics openness, and indicted the researcher (Ning Yu 2011)[5], how are measurement the financial openness, he estimated the openness for 20 countries and compare between them, (Chuck Skipton 2007)[6], discusses the openness and growth arguments, the Trade Openness Index (TOI) metric for measuring cross-country differences in relative trade liberalization. And he estimate the specifies and runs both the first- & second-stage models, Repeated and sustained interaction through international trade facilitates the ability of domestic producers to adopt foreign knowledge in their own production (Edwards, 1992)[7]. Trade openness begets a greater importance for competitive institutions of governance resulting in enhanced long-run economic growth (Wacziarg, 2001[8]; Skipton, 2007[9]).

There are many different ways that trade openness may impact economic growth. Many studies (Lee,1993[10]; Edwards, 1998 [11]; Rodrik,2000[12]; Baldwin, 2002 [13]; Skipton, 2004[14] have examined whether or not greater trade liberalization is likely to impact long-run economic growth with what could be described as either mixed results or, more accurately, The degree to which trade impacts long-run economic performance remains a contentious topic, but economic theory indicates that there is reason to believe that relatively open economies will achieve higher income levels and grow more rapidly than those with substantial barriers that retard trade.

This suggests that trade to GDP ratios are market determined variables subject to conventional theoretical analysis and empirical verification, This paper I shall use the ratio  $D.OP = \{(Exports/Imports) \times 100\}$  as the measure for openness of the economy to countries like Malaysia ,Indonesia ,Singapore ,Philippine and Thailand then compare with each other to gain access to the state the most open and influential in the economy The cause of calculate openness in this way unlike calculating some which combines imports and exports and then divides the result by the gross domestic product to become ratio represents the degree of openness, but cannot measure this degree on economic growth and on economic indicators as is the proportion as in economic sectors that are also a certain percentage and so I would suggest this solution to indicate the degree of economic openness are then estimated using regression models the effect of the degree of economic openness on GDP growth.

## GENERAL TRENDS OF FOREIGN TRADE

That the states of the sample vary among themselves in the issue of foreign trade and its strength as it depends on the availability of resources and economic capacity of production to the States and it was adopted the equation of the general trend Simi nature Logarithm to estimate the general trend of foreign trade of countries of the sample and which has taken the mathematical formula of the following: [15]

$$\ln Y = \ln b_0 + b_1 t + u$$

Ln= natural Logarithm

$$b_0 = \text{constan}, \quad b_1 = \text{slop} * \frac{1}{Y}, \quad t = \text{time}$$

And  $b_1$  parameter represents the compound annual growth rate. [ ]

### Exports

Data were collected values of exports from the World Bank for the period 1990-2010 and all the countries in the sample full exception of the Philippines there was a lack of data has been organized in the following table with the calculate the compound annual growth rate and the following table represents the exports of the countries data sample and the compound annual growth rates.

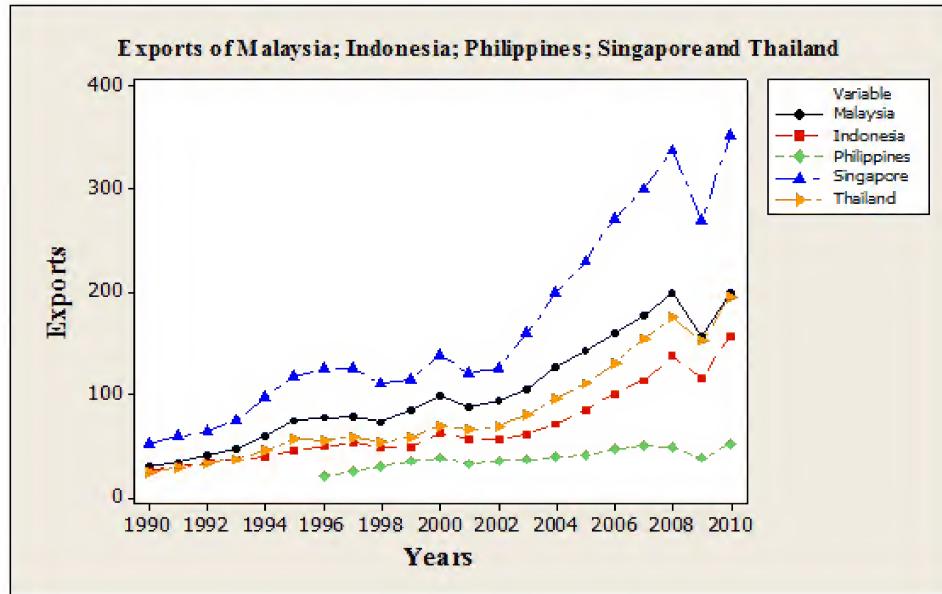
**Table 1: Shows the Value of Commodity Exports Countries of the Sample for the Period 1990-2010 an Estimated (\$ Billion)**

Years	Malaysia Value	Indonesia Value	Philippines Value	Singapore Value	Thailand Value
1990	29.225	25.675	-	52.716	23.069
1991	33.447	29.142	-	58.953	28.421
1992	40.768	33.967	-	63.463	32.474
1993	47.127	36.822	-	74.006	37.167
1994	58.842	40.053	-	96.825	45.236
1995	73.778	45.418	-	118.263	56.439
1996	77.904	49.814	20.543	125.008	55.678
1997	78.729	53.443	25.228	124.988	58.283
1998	73.254	48.848	29.496	109.905	53.583
1999	84.511	48.665	35.037	114.682	58.423
2000	98.229	62.124	38.078	137.806	68.819
2001	88.004	56.317	32.150	121.754	64.919
2002	94.058	57.159	35.208	125.177	68.108
2003	104.707	61.058	36.231	159.963	80.323
2004	126.640	71.582	39.681	198.633	96.248
2005	141.624	85.660	41.255	229.652	110.110
2006	160.669	100.799	47.410	271.809	130.580
2007	175.962	114.101	50.466	299.297	153.571
2008	198.703	137.020	49.078	338.176	175.908
2009	157.195	116.510	38.436	269.833	152.497
2010	198.791	157.779	51.498	351.867	195.312
<b>G.R%</b>	<b>9</b>	<b>8</b>	<b>5</b>	<b>9</b>	<b>10</b>

**Source:** 1. Data from the World Bank [www.worldbank.com](http://www.worldbank.com)

2. Calculated Researcher Compound Annual Growth Rate Using the Equation of the General Trend and Using the Program Minitab 14.1

Seen from the table above that the values of exports to Malaysia is the largest of all the countries of the sample and the mounting and at 9% and in spite of compound annual growth rates was very close, except Singapore, which had data missing, with compound annual growth rate about 5%, and was the highest state is Thailand's compound annual growth rate about 10%, but the value of exports has much less than Malaysia, we can observe this clearly in the following figure:



Source: The work of a researcher by using the Minitab 14.1 program

**Figure 1: Shows the Curves of the Value of Commodity Exports to the Countries of the Sample**

The figure above shows the fact that activity of the sample countries, exports to Singapore state that they were the strongest countries in the total and the curve of it is a higher than Malaysia, and the other countries are closed and dissolved Thailand, Indonesia III and IV, V and finally the Philippines.

## Imports

In the same way organized imports in the following table

**Table 2: Shows the Values of Imports of Goods to Countries of the Sample for the Period 1990-2010 (\$ Billion)**

Years	Malaysia	Indonesia	Philippines	Singapore	Thailand
	Value	Value	Value	Value	Value
1990	29.246	21.184		60.790	33.371
1991	36.581	25.869		66.094	37.588
1992	39.788	27.280		72.174	40.687
1993	45.390	28.328		85.231	46.239
1994	59.086	31.983		102.669	54.437
1995	77.046	40.629		124.503	70.781
1996	77.905	42.928	34.701	131.340	72.316
1997	78.434	41.680	38.581	132.442	62.462
1998	57.759	27.337	31.530	101.732	42.370
1999	64.939	24.032	32.568	111.061	50.309
2000	81.290	33.515	37.007	134.546	61.921
2001	73.079	30.962	34.943	116.003	61.961
2002	78.674	31.289	41.092	116.441	64.645
2003	82.444	32.551	42.576	136.264	75.824
2004	105.157	46.525	46.102	173.581	94.403

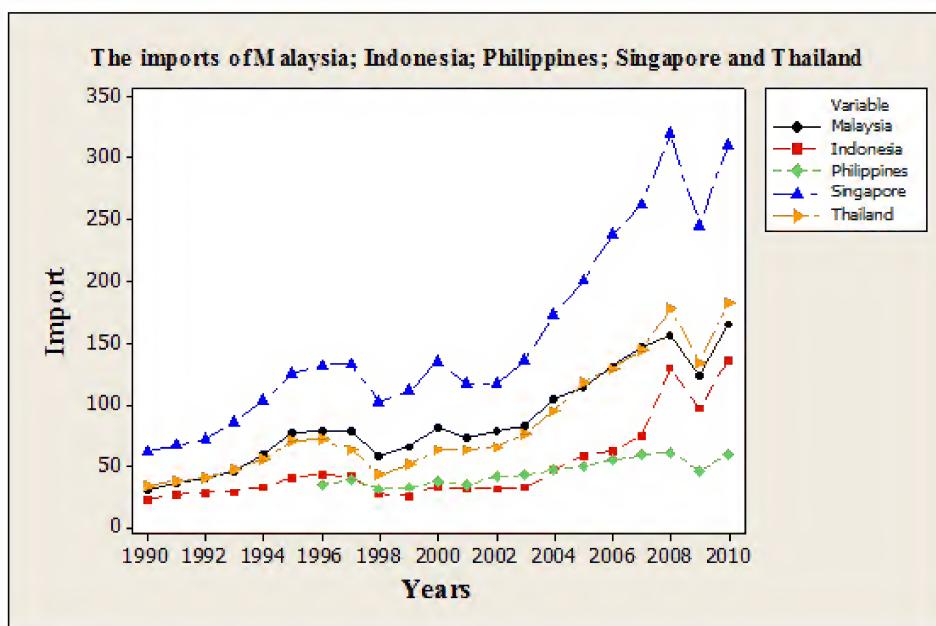
**Table 2: Contd.,**

2005	114.290	57.701	49.487	200.050	118.164
2006	131.127	61.066	54.078	238.711	128.584
2007	146.104	74.473	57.996	263.155	143.761
2008	155.661	129.244	60.420	319.780	178.613
2009	123.575	96.829	45.878	245.785	133.770
2010	164.586	135.663	58.468	310.791	182.393
<b>G.R%</b>	<b>7</b>	<b>7</b>	<b>4</b>	<b>7</b>	<b>8</b>

**Source:** 1. Data from the World Bank [www.worldbank.com](http://www.worldbank.com)

2. Calculated researcher compound annual growth rate equation general trend and using the Minitab 14.1. Program.

We can see from the annual growth rates are similar between the countries of Malaysia and Indonesia and Singapore, while the highest compound annual growth rates are Thailand as averaged about 8% and the least of the Philippines and cannot say for sure that it at least because lose some data for the years first, and we represented this data graphically, as in the following figure:



**Source:** The work of a researcher by using the Minitab 14.1 program

**Figure 2: Shows the Curves of the Value of Imports of Goods to Countries of the Sample**

Adopt from the figure that the State of Singapore was the highest among the sample countries, while countries were close afterlife among them.

Surplus and trade deficit countries of the sample

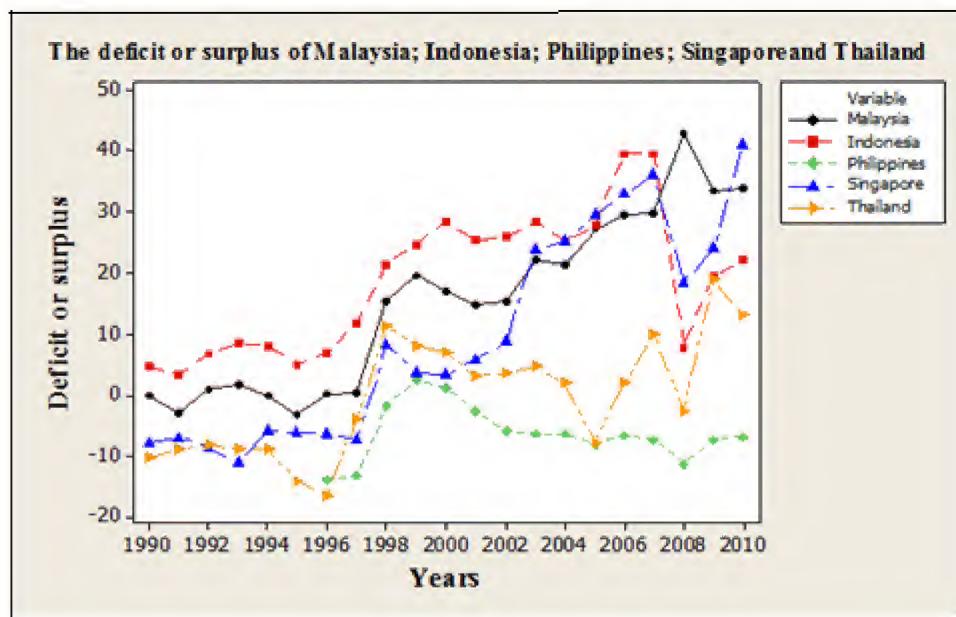
It is clear from the data surplus and trade deficit countries of the sample and this could see the economic strength of countries sample it, and from export and import data are obtained on the trade deficit or surplus by subtracting the value of imports from the value of exports and we has been organized in the following table:

**Table 3: Shows the Surplus and Trade Deficit Countries of the Sample for the Period 1990-2010 (\$ Billion)**

Years	Malaysia	Indonesia	Philippines	Singapore	Thailand
1990	-0.021	4.491	*	-8.074	-10.302
1991	-3.134	3.273	*	-7.141	-9.167
1992	0.980	6.687	*	-8.711	-8.213
1993	1.737	8.494	*	-11.225	-9.072
1994	-0.244	8.070	*	-5.844	-9.201
1995	-3.268	4.789	*	-6.240	-14.342
1996	-0.001	6.886	-14.158	-6.332	-16.638
1997	0.295	11.763	-13.353	-7.454	-4.179
1998	15.495	21.511	-2.034	8.173	11.213
1999	19.572	24.633	2.469	3.621	8.114
2000	16.939	28.609	1.071	3.260	6.898
2001	14.925	25.355	-2.793	5.751	2.958
2002	15.384	25.870	-5.884	8.736	3.463
2003	22.263	28.507	-6.345	23.699	4.499
2004	21.483	25.057	-6.421	25.052	1.845
2005	27.334	27.959	-8.232	29.602	-8.054
2006	29.542	39.733	-6.668	33.098	1.996
2007	29.858	39.628	-7.530	36.142	9.810
2008	43.042	7.776	-11.342	18.396	-2.705
2009	33.620	19.681	-7.442	24.048	18.727
2010	34.205	22.116	-6.970	41.076	12.919

**Source:** From Tables 2 and 3, the researcher calculated the deficit and the trade surplus

From the table above shows that all the countries of the sample suffered from the issue of trade deficit in some years, but the Indonesia was one of the countries of the sample with the status of the trade surplus and although the trade surplus Indonesia has declined in recent years, but it rose in both Malaysia and Singapore, the figure in the following shows the truth of the matter.



**Source:** The adoption of the above data and using the statistical Minitab 14.1 program

**Figure 3: Shows the Curves of the Surplus and Trade Deficit Countries of the Sample for the Period 1990-2010**

We note that the Philippines were in most of the length of time in the trade deficit while the more volatile is the state of Thailand.

It can measure the degree of deficit and surplus and intensity by dividing the absolute value of the degree of openness to the 100 and will thus be a percentage whenever is large whenever the severity of the deficit or surplus and the results were organized in the following table:

**Table 4: Shows the Severity of the Deficit or Surplus in Foreign Trade for the Countries of the Sample %**

Years	Malaysia	Indonesia	Philippines	Singapore	Thailand
1990	-0.00021	0.04491	*	-0.08074	-0.10302
1991	-0.03134	0.03273	*	-0.07141	-0.09167
1992	0.00980	0.06687	*	-0.08711	-0.08213
1993	0.01737	0.08494	*	-0.11225	-0.09072
1994	-0.00244	0.08070	*	-0.05844	-0.09201
1995	-0.03268	0.04789	*	-0.06240	-0.14342
1996	-0.00001	0.06886	-0.14158	-0.06332	-0.16638
1997	0.00295	0.11763	-0.13353	-0.07454	-0.04179
1998	0.15495	0.21511	-0.02034	0.08173	0.11213
1999	0.19572	0.24633	0.02469	0.03621	0.08114
2000	0.16939	0.28609	0.01071	0.03260	0.06898
2001	0.14925	0.25355	-0.02793	0.05751	0.02958
2002	0.15384	0.25870	-0.05884	0.08736	0.03463
2003	0.22263	0.28507	-0.06345	0.23699	0.04499
2004	0.21483	0.25057	-0.06421	0.25052	0.01845
2005	0.27334	0.27959	-0.08232	0.29602	-0.08054
2006	0.29542	0.39733	-0.06668	0.33098	0.01996
2007	0.29858	0.39628	-0.07530	0.36142	0.09810
2008	0.43042	0.07776	-0.11342	0.18396	-0.02705
2009	0.33620	0.19681	-0.07442	0.24048	0.18727
2010	0.34205	0.22116	-0.06970	0.41076	0.12919

**Source:** The researcher calculated values in the table

Note from the table above shows that the highest percentage of positive was in Malaysia in 2008, amounting to about 43% a trade surplus and either the lowest in any trade deficit was in 1995, amounting to about -3% and the severity of the deficit in the years 1990, 1991 and 1994 - 1996 and other years are the rates of surplus, while the other countries of the sample Indonesia did not suffer any proportion of trade deficit throughout the period of time and had the highest proportion in which is in 2006, amounting to about 40% of either the lowest which was in 1991, amounting to about 3%.

The Philippines was the highest intensity of the inability to have in 1996 as it amounted to some 14% and the highest trade surplus which was in 1999, amounting to about 2%, while Singapore, reaching the highest trade deficit in the year amounted to 1993 about 11% and the highest surplus in 2010, amounting to about 41%, and finally Thailand, amounting to the highest trade deficit in 1996 by about 16% and the highest surplus in 1998 of around 11%, and from this we can deduce that the disability rates of large and multi-throughout the length of time to a decline in gross domestic product and then the total national income and claims to reduce the real income of individuals as a result of structural imbalances in the economy.

#### Measure the Degree of Economic Openness to the Sample Countries

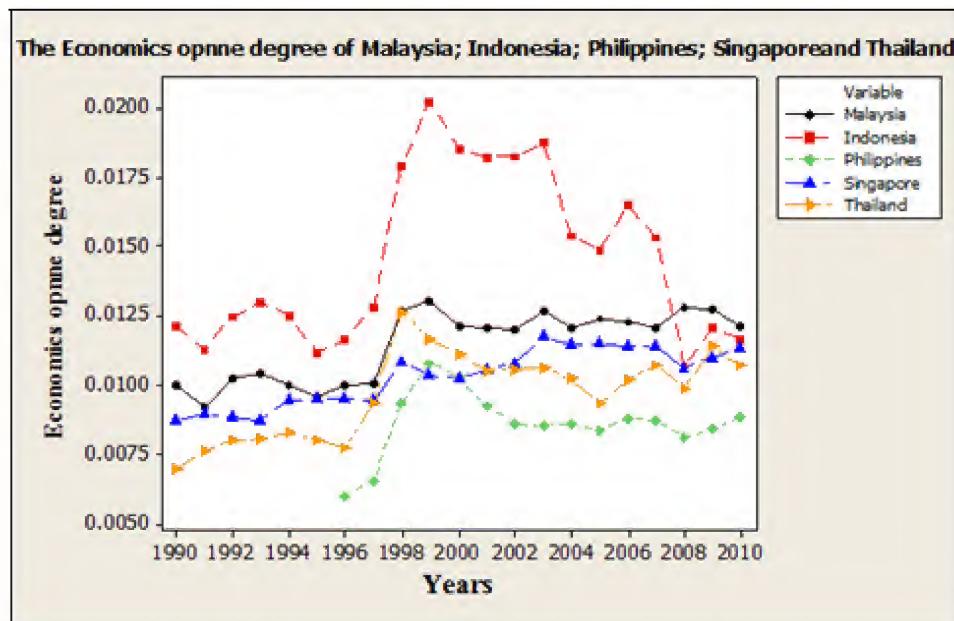
To determine the ability of the economy and its openness to the outside world must estimate the degree of economic openness by dividing the export value on the value of imports to all sample countries and multiply the result by 100 for all period, and we recognized as in the following table:

**Table 5: Shows the Degree of Economic Openness to the Sample Countries for the Period 1990-2010%**

Years	Malaysia	Indonesia	Philippines	Singapore	Thailand
1990	0.99928	1.21200	*	0.86718	0.69129
1991	0.91433	1.12652	*	0.89196	0.75612
1992	1.02463	1.24512	*	0.87931	0.79814
1993	1.03827	1.29984	*	0.86830	0.80380
1994	0.99587	1.25232	*	0.94308	0.83098
1995	0.95758	1.11787	*	0.94988	0.79738
1996	0.99999	1.16041	0.59200	0.95179	0.76993
1997	1.00376	1.28222	0.65390	0.94372	0.93310
1998	1.26827	1.78688	0.93549	1.08034	1.26464
1999	1.30139	2.02501	1.07581	1.03260	1.16128
2000	1.20838	1.85362	1.02894	1.02423	1.11140
2001	1.20423	1.81891	0.92007	1.04958	1.04774
2002	1.19554	1.82681	0.85681	1.07503	1.05357
2003	1.27004	1.87576	0.85097	1.17392	1.05933
2004	1.20429	1.53857	0.86072	1.14432	1.01954
2005	1.23916	1.48455	0.83365	1.14797	0.93184
2006	1.22529	1.65066	0.87670	1.13865	1.01552
2007	1.20436	1.53211	0.87016	1.13734	1.06824
2008	1.27651	1.06017	0.81228	1.05753	0.98486
2009	1.27206	1.20326	0.83779	1.09784	1.13999
2010	1.20782	1.16302	0.88079	1.13217	1.07083

**Source:** The researcher calculated values in the table

From the table above characterized Indonesia state economically more open countries in the sample, followed by Malaysia and then Singapore and Thailand, which fluctuated in which the degree of openness to the length of time and less the degree of economic openness characterized the Philippines, such as the researcher of this information as a graph, as follows:



**Source:** The adoption of the above data and using the statistical Minitab 14.1 program

**Figure 4: Shows the Curves of the Degree of Economic Openness to the Sample Countries for the Period of Time 1990-2010**

We note clearly the fact that opening up the economies of the sample.

## THE ESTIMATION AND ANALYSIS

### Description and Formulation of Economic Model

The Description of the economic relationship is the description of its elements are variables, and in this research is limited to the relationship between two variables, dependent variable and another independent, Dependent variable represents the value of GDP and the independent representing the degree of economic openness, and can even know the extent of the impact of the degree of openness to the value of the gross domestic product, and how to increase the value of GDP or become an obstacle to the degree of openness in the evolution of GDP, the relationship could be description as Econometrics relationship as follows:

$$\begin{aligned}
 GDP &= \alpha_0 + \alpha_1 O_p + u \\
 GDP &= \text{Gross Domesti Product value variable} \\
 \alpha_0 &= \text{constant} \\
 O_p &= \text{Opnne Degree variable} \\
 \alpha_1 &= \text{slop} \\
 u &= \text{Randum variable}
 \end{aligned}$$

This general model is Linearity, but the estimate will be for the best estimate in Linearity, using a linear equation and the equation exponential conversion logarithmic and quadratic equation to determine the effects squares of openness and a recent equation Cubism, which describes the ability of the degree of openness in linear, quadratic, cubic and their effects on the value of gross domestic product. Researcher expected a positive sign of the relationship if the trade surplus for the State which affects the value of GDP was positive, but if a trade deficit most certainly affects the relationship negatively.

### Estimate and Conclusions

Equations were estimated using the statistical program Minitab 14.1 for the sample countries, as follows:

- Estimation and Analysis of the Degree of Openness to the Value of the Gross Domestic Product in Malaysia

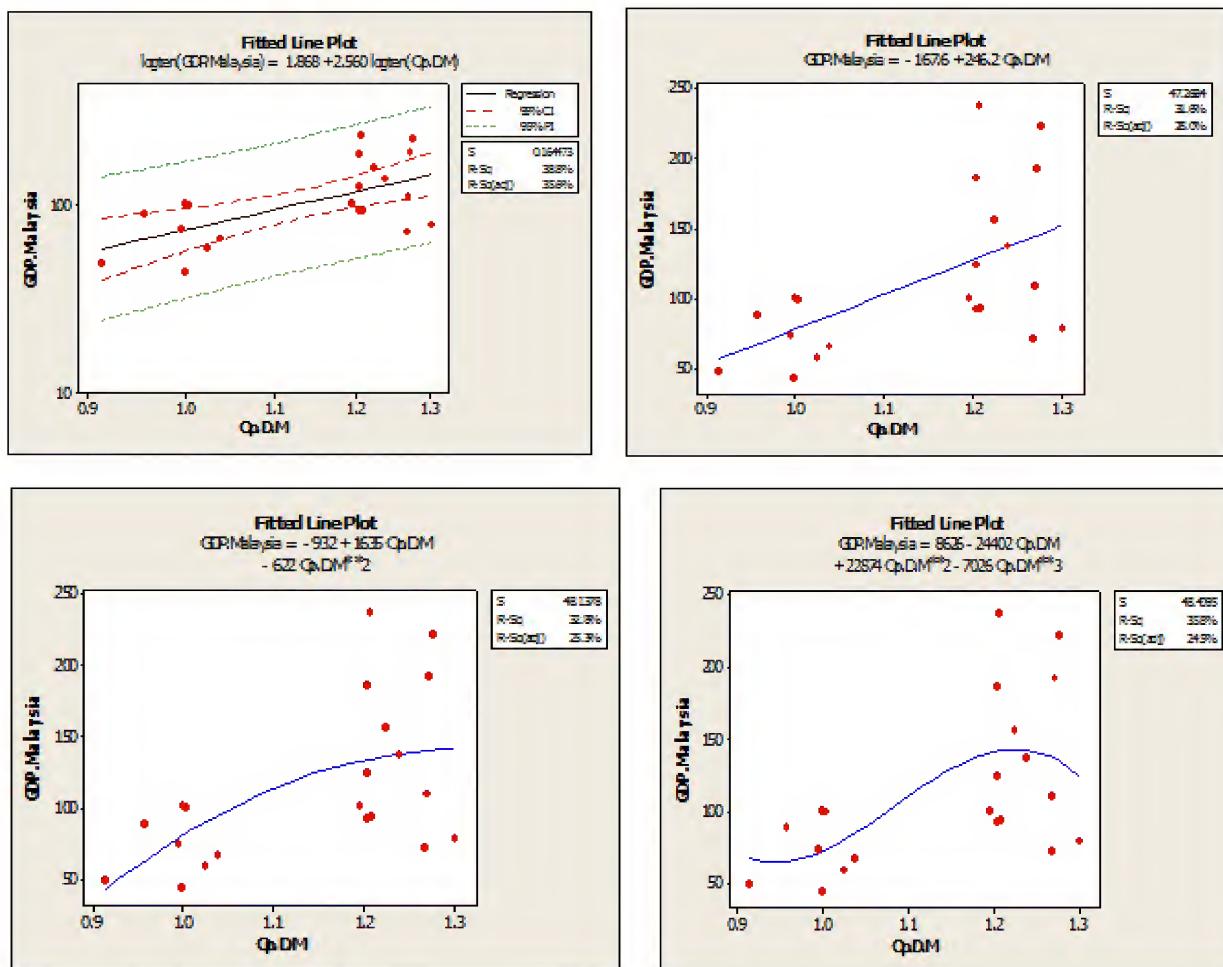
The researcher used the best linear estimate Fitted line plot for each equations and organized in a table, as follows:

**Table 6: Shows the Estimation Equations of the State of Malaysia**

Equations Parameters	Linear	Log-Log	Quadratic	Cubic
Constant	-167.6	1.868	-932	8626
O <sub>p</sub>	246.2	2.560	1635	-24402
			-622	22874
				-7026
S.e	47.2684	0.164473	48.1378	48.7095
	31.6%	38.8%	32.8%	35.8
r	56.2%	62.2%	57.3%	60%
F-test (2,21)	8.78 in 1%	12.05 in 1%	4.40 in 5%	3.16 out

**Source:** The researcher estimated equations by using Minitab 14.1 program  
 $F(2, 21)1\% = 8.19, F(2, 21)5\% = 4.30$

From the table above shows that the degree of openness was a positive value of its relationship with the value of gross domestic product estimates, linear and linear conversion logarithmic only in the first show parameter as a tendency which is the change in the case of an increase in the degree of openness and to change the GDP value of the parameter while the transfer logarithmic, the parameter of the degree of openness is elasticity and that any change by the change will be the proportion and therefore change is stronger than the linear either in the quadratic equation, the squares of the degree of openness showed negatively relationship with GDP, which shows that the squared values of the degree of openness will claim invers cause and leads to increased imports and the lack of exports, which leads to decrease in GDP, while the condition in equation Cubism showed negatively in the normal values and the values of cubic while the quadratic positive effect of this is likely the researcher that the appreciation of the linear transfer exponential was the best estimate the linear relationship stronger between the two variables and moral strongest test F The following charts for the best estimate of the four linear equations:



Source: From the Estimate and using the program

**Figure 5: Shows the Shapes of the Four Graphs above Estimate**

Note in the chart on logarithmic equation that all the points fall within the confidence limits and on the significant level of 5% and thus accept the estimate, as noted previously.

Graphic shows the shapes from the ability of the degree of openness about his relation with the value of gross domestic product and its exponential form shown in Figure 2 in the left top.

- Estimation and analysis of the degree of openness to the value of the gross domestic product in Indonesia.

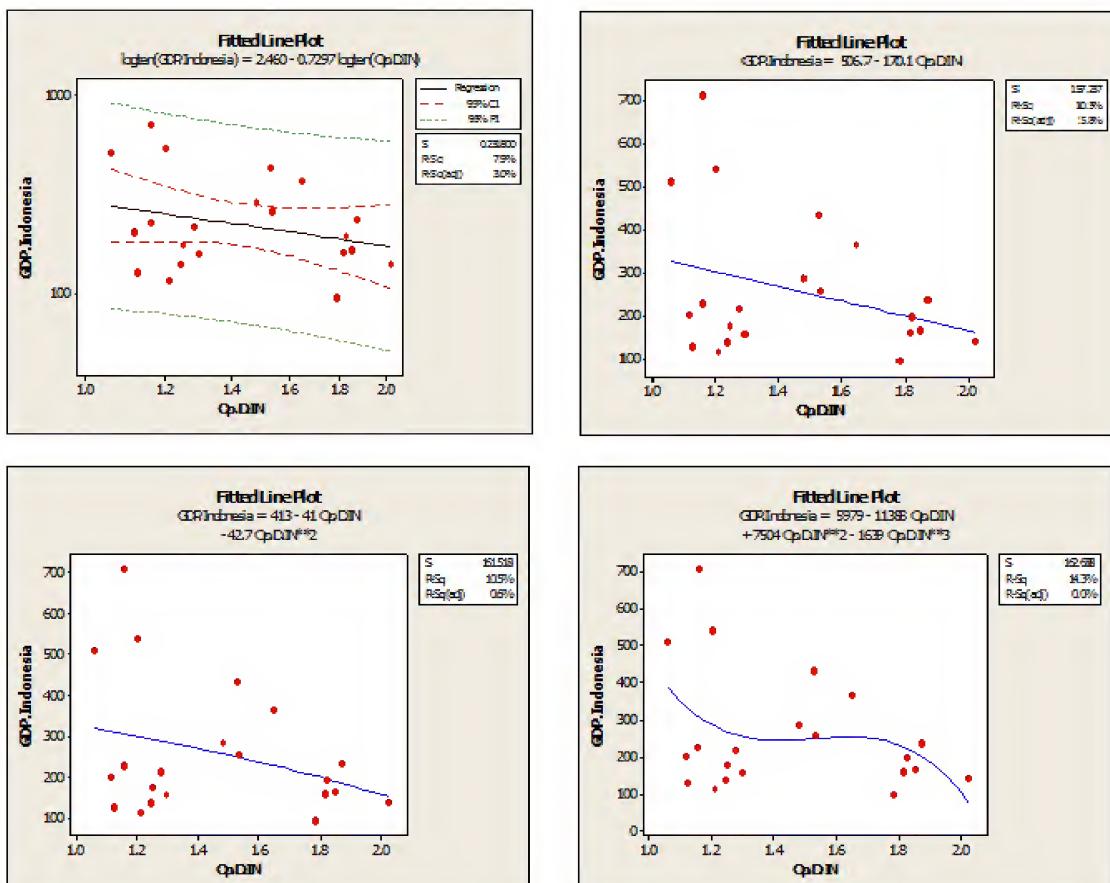
In the same way the table was organized estimate as following:

**Table 7: Shows the Four Estimation Equations to the Indonesia Country**

Equations Parameters	Linear	Log-Log	Quadratic	Cubic
Constant	506.7	2.460	413	5979
Op	-170.1	-0.7297	-41	-11388
$O_p^2$			-42.7	7504
$O_p^3$				-1639
S.e	157.237	0.2318	161.518	162.688
$R^2$	10.5%	7.9%	10.5%	14.3%
r	32.4%	28.1%	32.4%	37.8%
F-test (2,21)	2.23 out	1.62 out	2.06 out	3.17 out

**Source:** The Researcher estimated the equations by using the statistical program  
 $F(2, 21)1\% = 8.19, F(2, 21)5\% = 4.30$

The Estimation shows that the parameter of the degree of openness was a negative influence on the value of gross domestic product, which means that Indonesia Although exports positive and the trade surplus, but the opening of the economy affects the value of the gross domestic product, and even in the estimates of squared was negative value, except in the case of Cubism showed the square parameter where be positive.



**Source:** From the Estimation by using the Minitab 14.1 program

**Note:** In the chart on logarithmic equation that all the points fall within the confidence limits and on the significant level of 5% and thus accept the estimate, as noted previously.

**Figure 6: Shows the Graphs to Estimate the Four Equations**

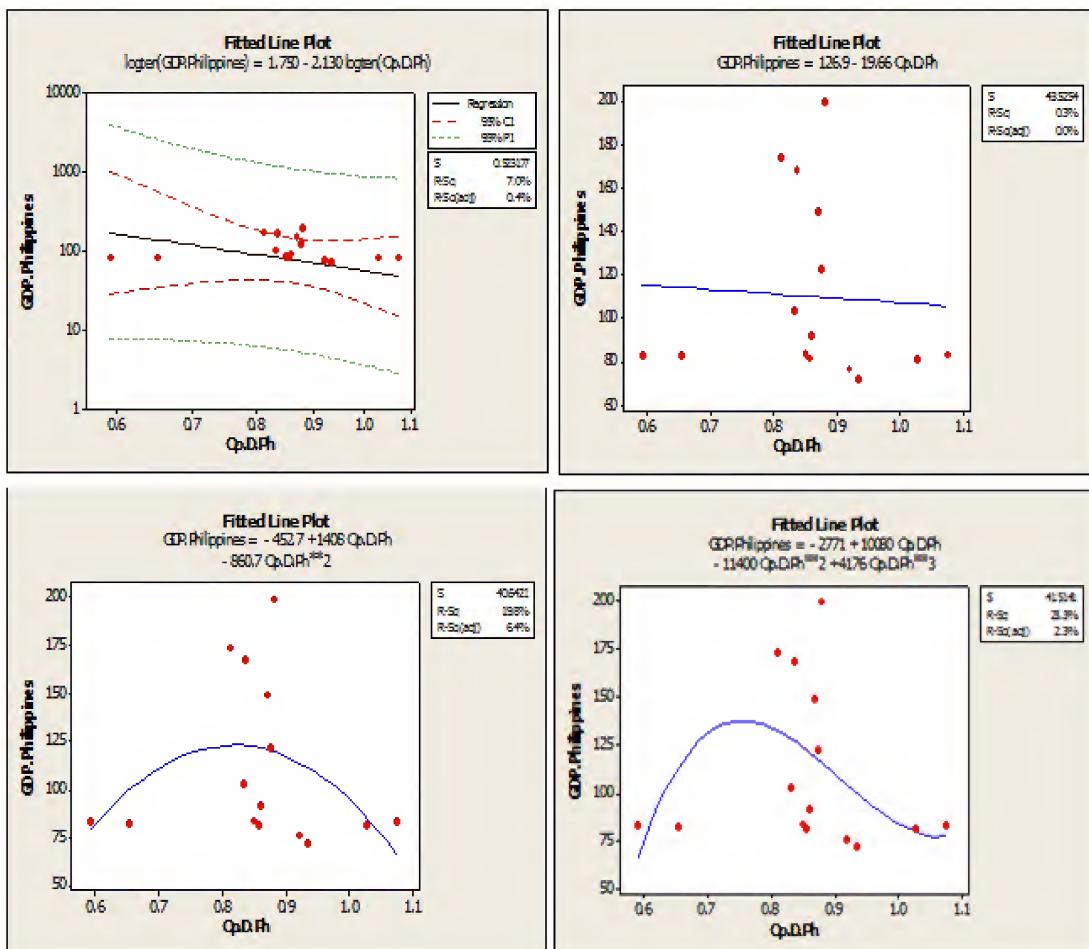
- Estimation and analysis of the degree of openness to the value of the gross domestic product in Philippines  
Organized the results of the Estimation of the State of the Philippines in the following table

Table 8: Shows the Estimation Equations of the Philippines

Equations Parameters	Linear	Log-Log	Quadratic	Cubic
Constant	126.9	1.750	-452.7	-2771
Op	-19.66	-2.130	1408	10080
$O_p^2$			-860.7	-11400
$O_p^3$				4176
S.e	43.5254	0.523177	40.6421	41.5141
$R^2$	3%	7%	19.8%	23.3%
r	17.3%	26.5%	44.5%	48.3%
F-test (2,21)	0.59 out	1.43 out	4.69 In 5%	5.77 In 5%

Source: The Researcher estimated the equations by using the statistical program  
 $F(2, 21)1\% = 8.19, F(2, 21)5\% = 4.30$

from the estimation results show that all equations of the Philippines was a bad estimate, but it certainly indicated that the degree of openness negatively affect the value of GDP was organized diagrams that show also comes on the negative degree of openness.



Source: From the Estimation by using the Minitab14.1 program

Note: In the chart on logarithmic equation that all the points fall within the confidence limits and on the significant level of 5% and thus accept the estimate, as noted previously.

Figure 7: Shows the Graphs to Estimate the Four Equations

- Estimation and analysis of the degree of openness to the value of the gross domestic product in Singapore

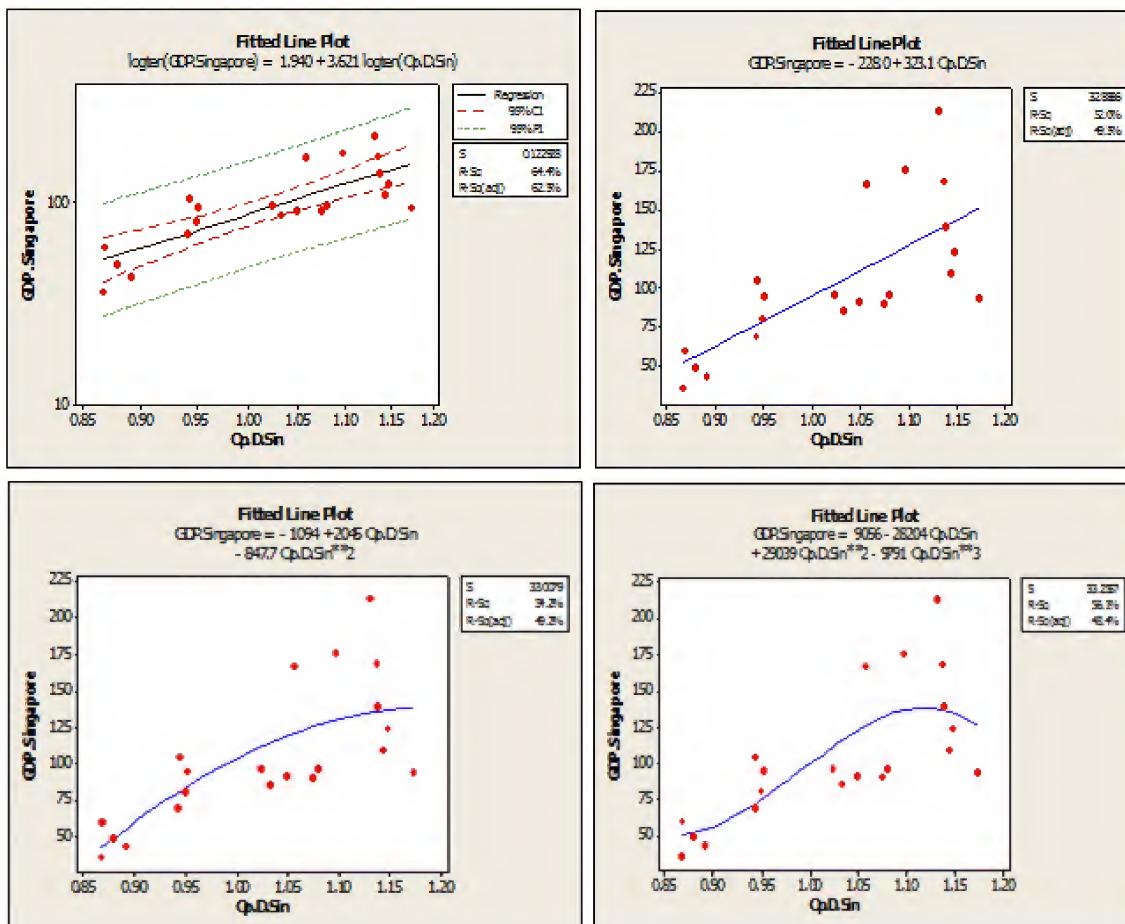
Equations estimated in the same way the State of Singapore, was organized in the following table:

**Table 9: Shows the Estimation Equations of the Singapore**

Equations Parameters	Linear	Log-Log	Quadratic	Cubic
Constant	-228.0	1.940	-1094	9056
Op	323.1	3.621	2045	-28204
$O_p^2$			-847.7	29039
$O_p^3$				-9791
S.e	32.886	0.122928	33.0079	33.2557
$R^2$	52%	64.4%	54.2%	56.1%
r	72.1%	80.3%	73.6%	74.9%
F-test (2,21)	20.62 In 1%	34.33 In 1%	10.67 In 1%	7.25 In 5%

**Source:** The Researcher estimated the equations by using the statistical program  
 $F(2, 21)1\% = 8.19, F(2, 21)5\% = 4.30$

Of the table shows us that the best estimate was in the exponential equation and the degree of openness was a positive relationship with the value of gross domestic product and can be observed the following graphic formats to enhance the understanding of movement the degree of economic openness.



**Source:** From the Estimation by using the Minitab14.1 program

**Note:** In the chart on logarithmic equation that all the points fall within the confidence limits and on the significant level of 5% and thus accept the estimate, as noted previously.

**Figure 8: Shows the Graphs to Estimate the Four Equations**

- Estimation and analysis of the degree of openness to the value of the gross domestic product in Thailand.

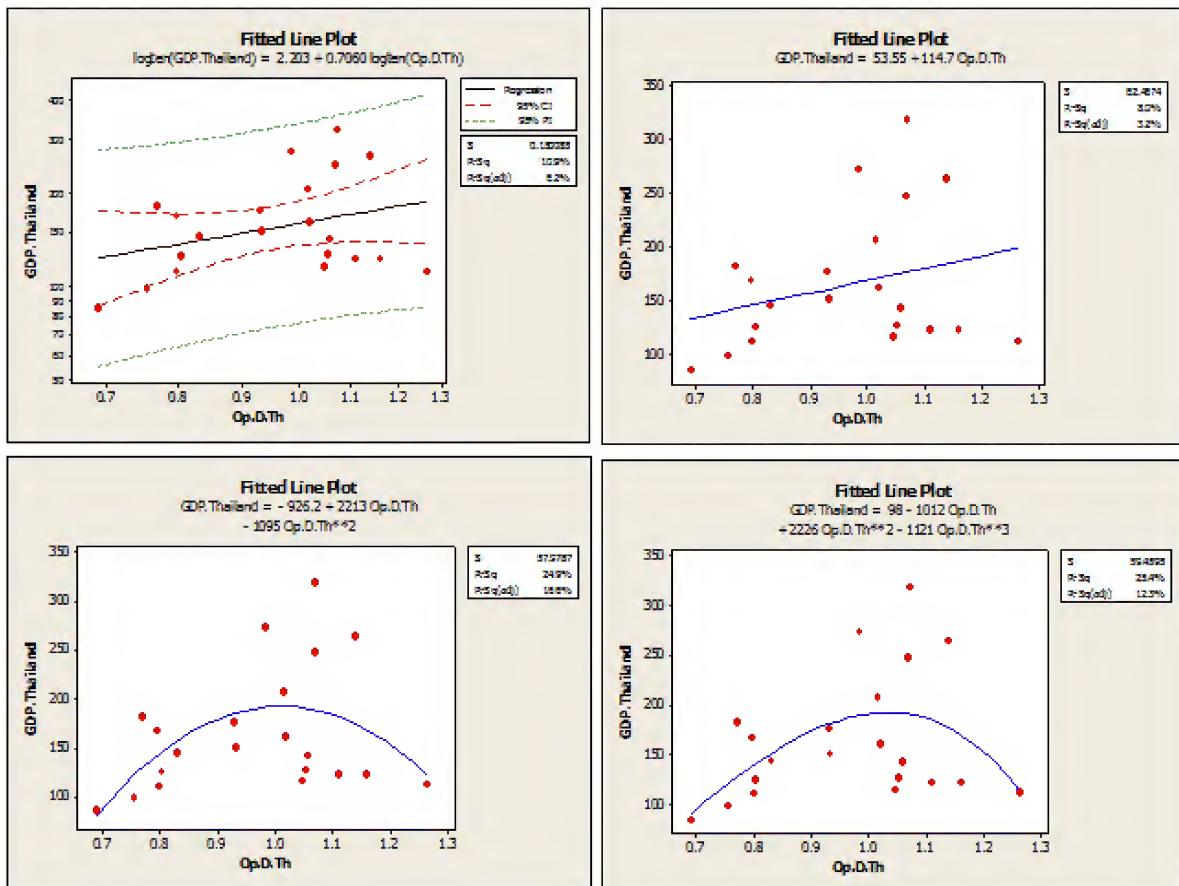
By the same way, we are organized the estimation as following table:

**Table 10: Shows the Estimation Equations of the Thailand**

Equations Parameters	Linear	Log-Log	Quadratic	Cubic
Constant	53.55	2.203	-926.2	98
Op	114.7	0.7060	2213	-1012
$O_p^2$			-1095	2226
$O_p^3$				-1121
S.e	62.4674	0.150085	57.9787	59.4595
$R^2$	8%	10.9%	24.9%	25.4%
r	28.3%	32.9%	50%	50.4%
F-test (2,21)	1.65 out	2.32 out	6.29 In 5%	6.46 In 5%

**Source:** The Researcher estimated the equations by using the statistical program  
 $F(2, 21)1\% = 8.19, F(2, 21)5\% = 4.30$

From above table the squared equation was better in the estimate, but the exponential equation can be used to it more as the squares, because the degree of openness was negative as well as in equations other and so will a researcher in the estimate on the exponential and diagrams measured can be judged on the direction of the degree of openness as the best estimate.



**Source:** From the Estimation by using the Minitab14.1 program

**Note:** In the chart on logarithmic equation that all the points fall within the confidence limits and on the significant level of 5% and thus accept the estimate, as noted previously.

**Figure 9: Shows the Graphs to Estimate the Four Equations**

So that we can show the impact of the degree of openness to the value of the gross domestic product could enter the true values of the variable in the model is estimated, has been the adoption of the model exponential because he is unable to give the concept of an economic movement of economic openness by a parameter openness which is the elasticity of the variable will be drawn graphically by using the estimation value of the gross domestic product to see how effect the degree of openness on it.

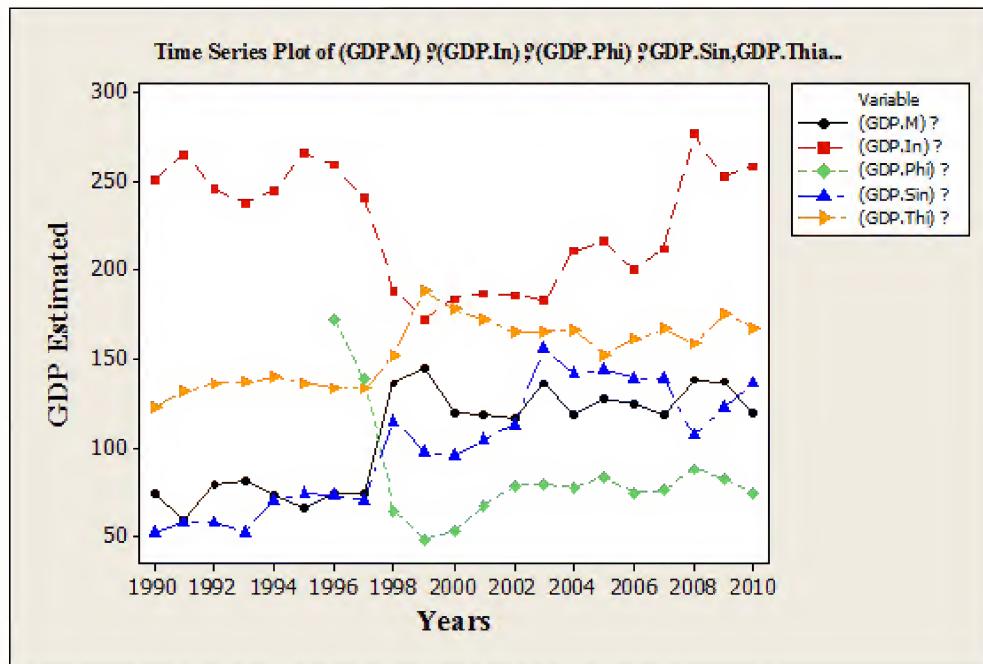
Organized researcher estimated values to the values of gross domestic product of the exponential equation estimated for the sample countries as follows:

**Table 11: Shows the Estimated Values of the Gross Domestic Product of Exponential Equations Estimated for the Sample Countries**

<b><math>\widehat{GDP.M}</math></b>	<b><math>\widehat{GDP.In}</math></b>	<b><math>\widehat{GDP.Phi}</math></b>	<b><math>\widehat{GDP.Sin}</math></b>	<b><math>\widehat{GDP.Thu}</math></b>
73.7	250.7		52.0	123.0
58.7	264.4		57.6	131.0
78.6	245.8		57.6	136.1
81.3	238.2		52.2	136.8
73.02	244.7		70.5	140.1
66.05	265.9		73.9	136.0
73.8	258.7	171.8	72.8	132.7
74.5	240.6	139.0	70.6	132.7
135.6	188.8	64.8	115.2	152.0
144.9	172.3	48.1	97.8	188.4
119.8	183.8	52.91	95.0	177.4
118.8	186.4	67.2	103.8	172.0
116.6	185.8	78.2	113.2	165.0
136.1	182.3	79.3	155.3	165.6
118.8	210.6	77.4	141.9	166.2
127.8	216.2	82.9	143.6	151.8
124.2	200.1	74.4	139.4	161.3
118.8	211.3	75.6	138.8	167.2
137.9	276.4	87.6	106.7	157.9
136.7	251.9	82.0	122.1	175.1

**Source:** The researcher calculated the values from the results of the estimation by using the original data

**Note:** From the table above that the gross domestic product in Indonesia have been affected by economic openness, and so the value is greater than other countries which shows that the degree of openness Indonesia Economic largest countries in the sample and enhances say that the foreign trade Indonesia was in surplus to the length of time studied namely that openness economy has benefited the economy Indonesia and promoted foreign trade to its advantage, and come from beyond the State of Thailand, which was suffering from a disability and in spite of economic openness to the world and the degree of openness, which came second, but this opening of the economy is not in the interest of the Thailand economy because of the depletion of foreign trade is not any that imports the largest of its exports, The State of Malaysia and Singapore were both in the opening of the economy during the time period studied, but Singapore was the biggest in the degree of openness because of international companies on its his land and after close to her state of Malaysia and finally the Philippines as the degree of openness where less than countries sample and can be seen clearly in Figure 10, which illustrates the fact that the degree of economic openness and its impact on the GDP of the countries and that, all the countries rise curves to the top exception of the Philippines as it was we gave subrogated to the bottom of any domestic product is negatively affected by the degree of openness due to imports on the superior value of exports.



Source: The data from Table 11 and by using the Minitab14.1 program

**Figure 10: Shows the Curves of the Degree of Openness Affected on the Value of Gross Domestic Product Estimated**

## CONCLUSIONS

- Shows that the State of Indonesia was one of the best countries in the sample that did not suffer from a deficit of foreign trade.
- The states of the Philippines and Thailand were the country's most of the sample countries that suffer from a deficit in foreign trade
- The states of Malaysia and Singapore where the deficit was very small throughout the time period studied and thus come in terms of the arrangement after Indonesia.
- Shows the impact of economic openness was in the interest of Indonesia first, and then Singapore, Malaysia, boosting exports and increasing their surplus trade.
- As well as showing the effect of the degree of economic openness to the states of the Philippines and Thailand was the worst countries in the sample if the effect directly on the Thailand and Philippine economies in favor of imports and Led to the depletion of GDP.

## RECOMMENDATIONS

- The Researcher to promote foreign trade and exports, particularly in Indonesia, as the opening of the economy in favor also in Malaysia and Singapore.
- The Researcher to stop the depletion of gross domestic product in favor of imports in the states of the Philippines and Thailand and to the promotion of foreign trade for the benefit of exports and the search for outlets for its exports and reduce imports from them.

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